Question #1 of 60

C) not violating the Standards.

Explanation

There is no violation of the Standards in Transaction A. Connor is basically hedging any potential loss from a decline in the price of Stock A prior to the completion of his sale transaction. There is no apparent attempt to manipulate the market in this transaction.

For Further Reference:
Study Session 1, LOS 2.a, b
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #2 of 60

A) violating the Standards because his option trading can be reasonably expected to affect his quarterly performance.

Explanation

A critical factor in assessing any violation of Standard II(B) Integrity of Capital Markets - Market Manipulation is the intent of the parties involved. In this case, Connor is hoping that his options transaction drives up the price of Stock B, which would improve the reported performance of the Biogene Fund. This type of manipulation would be a violation of the Standard.

For Further Reference:
Study Session 1, LOS 2.a, b
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #3 of 60

C) not violating the Standards.

Explanation

Transactions meant to minimize tax liabilities are not prohibited by the Standards. If the Biogene Fund benefits, the investors in the fund will presumably benefit also.

For Further Reference:
Study Session 1, LOS 2.a, b
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #4 of 60

C) neither priority of transactions nor independence and objectivity.

Explanation

Connor was not pressured to take the IPO, and he believed it was a good investment. Connor received no confidential information. The IPO had been made available to all Apple clients prior to Biogene. There is no evidence of a violation of either of these Standards.

For Further Reference:
Study Session 1, LOS 2.a, b

SchweserNotes: Book 1, p.5
CFA Program Curriculum: Vol.1 p.21

Question #5 of 60

B) may engage in transaction-based manipulation of Stock D in the future, in violation of Standards relating to market manipulation.

Explanation

By suggesting that Biogene might need to acquire more shares to support the price in the future, Arnold is suggesting that Apple would be willing to manipulate the market by creating false trading volume. This is transaction-based manipulation in violation of Standard II(B) Integrity of Capital Markets - Market Manipulation.

For Further Reference:
Study Session 1, LOS 2.a, b
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #6 of 60

A) Connor has violated Standards relating to material nonpublic information, and Arnold has violated Standards relating to preservation of confidentiality.

Explanation

By changing his previous decision and accepting the 2% based on Arnold's e-mail, Connor has violated the Standards related to material nonpublic information. He has acted based upon the receipt of inside information. Arnold has violated the Standards related to both material nonpublic information and preservation of confidentiality. Arnold violated Standard III(E) - Duties to Clients - Preservation of Confidentiality by revealing information he received based upon a special relationship with Stock D. By passing that information to another area of Apple, Arnold has violated Standard II(A) Integrity of Capital Markets - Material Nonpublic Information as well.

For Further Reference:
Study Session 1, LOS 2.a, b
SchweserNotes: Book 1 p.5
CFA Program Curriculum: Vol.1 p.21

Question #7 of 60

B) Krosse.

Explanation

Krosse is a developing nation with the highest α (share of capital in GDP) among all the countries. A high value of α indicates that the next unit of capital added will increase output almost as much as the previous unit of capital. Developing nations with a high α are more likely to benefit from capital deepening, which should result in an increase in productivity (at least in the short term).

For Further Reference:
Study Session 4, LOS 14.d
SchweserNotes: Book 1 p.279
CFA Program Curriculum: Vol.1 p.613

Question #8 of 60

C) experienced an increase in average hours worked.

Explanation

Krosse's labor growth rate is greater than that of Procken's. Labor growth can be accomplished by an increase in the labor force participation rate, an increase in average hours worked, additional supply of labor by immigration, or a higher population growth rate. We are told that the population growth rate is equal for the two countries. The only choice that allows for higher labor growth rate is then higher average hours worked.

For Further Reference:
Study Session 4, LOS 14.g
SchweserNotes: Book 1 p.284
CFA Program Curriculum: Vol.1 p.619

Question #9 of 60

C) 2.3%.

Explanation

Growth rate in potential GDP = long-term growth rate of technology + α × (long-term growth rate of capital) + (1 - α) × (long-term growth rate of labor).

The growth rate in potential GDP using a calculator: PV = -$4,800; FV = +$5,778;
N = 5; solve for I/Y. I/Y = 3.78%.

Rearrange the equation to solve for long-term growth rate of technology.
3.78% = LTGRT + (0.225) × 3.8% + (0.775) × 0.8%
LTGRT = 3.78% - 0.86% - 0.62%
LTGRT = 2.30%

For Further Reference:
Study Session 4, LOS 14.e
SchweserNotes: Book 1 p.282
CFA Program Curriculum: Vol.1 p.615

Question #10 of 60

A) Weira.

Explanation

If the neoclassical theory holds then the sustainable growth rate of output of G* is the same as the long-term growth rate of capital.

The growth rate in potential GDP using a calculator:
Procken (Past = 4.0%): PV = -$250; FV = +$306; N = 5; solve for I/Y = 4.12%.
Krosse (Past = 4.7%): PV = -$250; FV = +$315; N = 5; solve for I/Y = 4.73%.
Weira (Past = 4.5%): PV = -$4,500; FV = +$5,262; N = 5; solve for I/Y = 3.18%.
Toban (Past = 3.8%): PV = -$4,800; FV = +$5,778; N = 5; solve for I/Y = 3.78%.

Weira's stock market appreciation rate of 4.5% exceeds the potential growth rate of GDP of 3.2% significantly. The difference between potential GDP growth rate and past stock market appreciation for the other three countries differences is relatively smaller.

For Further Reference:
Study Session 4, LOS 14.b, i

SchweserNotes: Book 1 p.278, 286
CFA Program Curriculum: Vol 1 p.606, 636

Question #11 of 60

A) 6%.

Explanation

It is stated in the vignette that Weira has reached steady-state. In steady state (i.e., in equilibrium), the marginal product of capital (MPK = αY/K) and marginal cost of capital (i.e., the *rental price of capital*, r) are equal; hence: αY/K = r.

r = (0.25)(4,500) / (18,750) = 0.06 or 6%

For Further Reference:
Study Session 4, LOS 14.d
SchweserNotes: Book 1 p.279
CFA Program Curriculum: Vol.1 p.613

Question #12 of 60

B) Krosse.

Explanation

Based on the data in the vignette, Krosse and Procken are developing countries. The GDP per capita for Krosse is $250 billion divided by 20.0 million people, which is equal to $12,500. The GDP per capita for Procken is $250 billion divided by 20.4 million people, which is equal to $12,255. Krosse is more likely to achieve convergence because Krosse is showing more willingness towards opening up the economy to trade and financial flows than is Procken; Krosse's international trade as a proportion of GDP is higher than Proken's, and comments by Krosse's representative indicate that inflow of foreign capital would be welcome. Finally, comments by Procken's representative indicate an inward-oriented policy, which could hinder convergence.

For Further Reference:
Study Session 4, LOS 14.j
SchweserNotes: Book 1 p.288
CFA Program Curriculum: Vol.1 p.652

Question #13 of 60

A) increase.

Explanation

Inventory turnover is cost of sales divided by inventory. A decrease in inventory is likely to cause the ratio to increase as the amount of inventory relative to the cost of goods sold decreases.

For Further Reference:
Study Session 6, LOS 20.d
SchweserNotes: Book 2 p.143
CFA Program Curriculum: Vol.2 p.302

Question #14 of 60

A) 5 points.

Explanation

Ending inventory and other current assets are both included within total assets, so the reclassification will not alter total assets or revenue.

For Further Reference:
Study Session 6, LOS 19.d
SchweserNotes: Book 2 p.104
CFA Program Curriculum: Vol.2 p.210

Question #15 of 60

C) The financial statements submitted to the bank are decision-useful as they exhibit no evidence of biased accounting choices.

Explanation

Biased accounting choices are reflected not only in the numbers presented but also in the manner of disclosure of information. The lack of transparency of GAAP-compliant net income relative to the headline net income suggests that the financial statements are not very decision-useful.

For Further Reference:
Study Session 6, LOS 19.b
SchweserNotes: Book 2 p.101
CFA Program Curriculum: Vol.2 p.197

Question #16 of 60

B) negative compound annual growth of over 35%, and earnings that are of low quality.

Explanation

	2014	2013	2012
Headline Net Income	**1,262.7**	**1,104.4**	**1,086.0**
Network costs (from note A)	885.5	325.0	202.0
Settlements (from note A)	24.8	22.1	20.0
Net Income	**352.4**	**757.3**	**864.0**

Net Income CAGR $[(352.4/864)^{1/2}] - 1 = -0.36 = -36\%$

Average stockholders' equity = (8,380 + 7,980)/2 = 8,180

Return on stockholders' equity for 2014 = 352.4/8,180 = 4.31%

Earnings quality refers not only to compliance with GAAP but also to the persistence and level of earnings. The GAAP-compliant net income does not satisfy the minimum return requirement; hence, earnings are low (and therefore of low quality).

For Further Reference:
Study Session 5, LOS 19.h

SchweserNotes: Book 2 p.109
CFA Program Curriculum: Vol.2 p.223

Question #17 of 60

C) understate net income.

Explanation

An investment in associates is accounted for using the equity method, while investment in a subsidiary is accounted for using the acquisition method. Using either method, net income will be the same. However, fixed assets and total revenue will be lower under the equity method.

For Further Reference:
Study Session 6, LOS 19.k
SchweserNotes: Book 2 p.113
CFA Program Curriculum: Vol.2 p.246

Question #18 of 60

B) ROE excluding the effects of investment in associates in 2014 was approximately 35% lower than the total ROE in 2014.

Explanation

	2014	**2013**	**2012**	**2011**
	(£000)	(£000)	(£000)	(£000)
Revenue	998.5	918.6	817.6	
Net Income	44.4	31.2	26.7	
Income from Associates	17.8	11.2	8.4	
NI Excluding Associates	26.6	20.0	18.3	
Total Assets	1,260.8	1,166.6	1,043.2	1,012.1
Investment in Assoc.	101.6	83.8	72.6	64.2
Total Assets (Ex assoc.)	1,159.2	1,082.8	970.6	947.9
Equity	638.4	569.8	542.5	524.2

Average Equity	604.1	556.2	533.4	510.2
Average Assets	1,213.7	1,104.9	1,027.7	500.8
Average Assets (Ex assoc.)	1,121.0	1,026.7	959.3	
Net Margin (Ex assoc.)	2.66% (26.6 / 998.5)	2.18% (20.0 / 918.6)	2.24% (18.3 / 817.6)	
Net Margin	4.45% (44.4 / 998.5)	3.40% (31.2 / 918.6)	3.27% (26.7 / 817.6)	
Asset TO (Ex assoc.)	0.891 (998.5 / 1121.0)	0.895 (918.6 / 1026.7)	0.852 (817.6 / 959.3)	
Asset Turnover	0.823 (998.5 / 1213.7)	0.831 (918.6 / 1104.9)	0.796 (817.6 / 1027.7)	
Leverage	2.01 (1213.7 / 604.1)	1.99 (1104.9 / 556.2)	1.93 (1027.7 / 533.4)	
ROE Total	7.35% (44.4 / 604.1)	5.61% (31.2 / 556.2)	5.01% (26.7 / 533.4)	
ROE (Ex assoc.)	4.77% (0.0266 × 0.891 × 2.01)	3.87% (0.0218 × 0.895 × 1.99)	3.68% (0.0224 × 0.852 × 1.93)	

For Further Reference:
Study Session 6, LOS 20.a
SchweserNotes: Book 2 p.126
CFA Program Curriculum: Vol.2 p.271

Question #19 of 60

C) net income.

Explanation

Assuming International Oilfield is an integrated sales division and Continental Supply makes virtually all of the decisions, the functional currency is likely the presentation currency. Thus, the

temporal method is used. Under the temporal method, remeasurement gains and losses are reported in the income statement.

For Further Reference:
Study Session 5, LOS 18.d
SchweserNotes: Book 2 p.63
CFA Program Curriculum: Vol.2 p.134

Question #20 of 60

A) $95.7 million.

Explanation

International Oilfield is carrying 867 (i.e., 975 - 108) LCU original cost of equipment purchased in 2014 on their books. The 2015 losses due to fire and related insurance settlement do not affect depreciation in 2016 (other than depreciating fewer assets). The new equipment purchased during the year would be depreciated for a half year in 2016. Depreciation will be translated at the historical exchange rate under the temporal method.

Equipment	*Calculation*	*LCU Depreciation*	*Historical Exchange Rate*	*USD Depreciation*
Originally purchased in 2014	867 / 10	86.7	1	$86.70
Purchased in 2016 (1/2 year)	1/2 × (225 / 10)	11.25	1.25	$9.00
Total				$95.70

For Further Reference:
Study Session 5, LOS 18.d
SchweserNotes: Book 2 p.63
CFA Program Curriculum: Vol.2 p.134

Question #21 of 60

A) -$227 million.

Explanation

Under the current rate method, gains and losses that occur as a result of the translation process do not show up on the income statement but are instead accumulated in a balance sheet account called the cumulative translation adjustment account (CTA). The translation gain or loss in each year is calculated and added to the account, acting like a running total of translation gains and losses. The CTA is simply an equity account on the balance sheet.

To compute the CTA for Continental's balance sheet, force the accounting equation (A = L + E) to balance with the CTA; [(120 million cash and receivables + 631.3 million inventory + 820.7 million equipment - 600 million liabilities) / 1.50] - $350 million capital stock - $525 retained earnings = -$227 million. The LCU 350 capital stock was issued at the end of 2013 at an exchange rate of LCU 1 = $1. The $525 retained earnings figure was given in the text.

For Further Reference:
Study Session 5, LOS 18.d
SchweserNotes: Book 2 p.63
CFA Program Curriculum: Vol.2 p.134

Question #22 of 60

B) higher.

Explanation

Compared to the temporal method, the current rate method will result in a higher gross profit margin percentage (higher numerator) when the local currency is depreciating as is the case in this scenario (the exchange rate has risen from LCU 1 per $1 to LCU 1.25 per $1; thus, it costs more LCUs to buy $1 which is the result of a depreciating LCU). Under the temporal method, COGS is remeasured at the historic rate; thus, COGS is not impacted by the depreciating currency. Under the current rate method, COGS is translated at the average rate; thus, COGS is lower because of the depreciating currency. Lower COGS results in a higher gross profit margin percentage.

For Further Reference:
Study Session 5, LOS 18.e
SchweserNotes: Book 2 p.69
CFA Program Curriculum: Vol.2 p.143

Question #23 of 60

C) Quick ratio.

Explanation

Both the numerator (cash + receivables) and denominator (current liabilities) of the quick ratio are remeasured at the current exchange rate under the temporal method. Inventories are ignored in the quick ratio. Since the same rate is used to remeasure both the numerator and denominator, the ratio does not change when stated in the presentation currency.

For Further Reference:
Study Session 5, LOS 18.e
SchweserNotes: Book 2 p.69
CFA Program Curriculum: Vol.2 p.143

Question #24 of 60

A) A gain is recognized in the income statement.

Explanation

The temporal method is required if the foreign subsidiary is operating in a highly inflationary environment, defined as cumulative inflation of more than 100% in a 2-year period. Compounded inflation of 30% annually for three years is approximately 120% ($1.30^3 - 1$). Under the temporal method, remeasurement gains and losses are recognized in the income statement. In this case, International Oilfield has a net monetary liability position (monetary liabilities of 600 million > monetary assets of 120 million). Holding net monetary liabilities denominated in a currency that is depreciating will result in a gain.

For Further Reference:
Study Session 5, LOS 18.g
SchweserNotes: Book 2 p.81
CFA Program Curriculum: Vol.2 p.140

Question #25 of 60

C) Adjustment 3.

Explanation

CEO compensation is consistent with market estimates, so no adjustment is necessary. Long-term leases on facilities are legally binding; hence, no adjustment is necessary until the lease comes up for renewal. Elimination of excessive perks is a valid adjustment.

For Further Reference:
Study Session 11, LOS 34.e
SchweserNotes: Book 3 p.237
CFA Program Curriculum: Vol.4 p.525

Question #26 of 60

C) $16 million.

Explanation

Normalized EBITDA	32
(−) Depreciation	11
(=) EBIT	21
Taxes @ 25%	5.25
Operating income after tax	15.75
(+) Depreciation	11
(−) Capex	6
(−) WCInv	5
(=) FCFF	15.75

For Further Reference:
Study Session 11, LOS 34.e
SchweserNotes: Book 3 p.237
CFA Program Curriculum: Vol.4 p.525

Question #27 of 60

B) free cash flow model.

Explanation

Sampson intends to make a purchase offer for controlling equity interests in the target companies. Cash flow models are more appropriate because a controlling interest allows Sampson to set the target company's financing, investment, and distribution policies.

For Further Reference:
Study Session 9, LOS 27.h
SchweserNotes: Book 3 p.7
CFA Program Curriculum: Vol.4 p.28

Question #28 of 60

B) NavTech.

Explanation

NavTech recently has decided to capitalize much of its research and development expense, thereby deferring much of its R&D expense (rather than immediately recognizing R&D as expense on the income statement). This is an example of aggressive accounting, especially if revenues cannot be matched directly with R&D expense. By reducing the investment return assumption on its pension investments, Sampson is moving to a more conservative approach. By capitalizing its leases (treating as finance leases rather than operating leases), Aerospace Communications more clearly reports its liabilities and assets.

For Further Reference:
Study Session 9, LOS 27.e
SchweserNotes: Book 3 p.4
CFA Program Curriculum: Vol.4 p.12

Question #29 of 60

C) liquidation value.

Explanation

If the company's business model is not sustainable, the liquidation value is more appropriate than its value as a going concern (which could be negative). Balance sheet value is an accounting concept, not a valuation concept.

For Further Reference:
Study Session 9, LOS 27.b
SchweserNotes: Book 3 p.2
CFA Program Curriculum: Vol.4 p.8

Question #30 of 60

C) 7%.

Explanation

Defining P_0 as the current stock price, D_1 as the expected year-end dividend, r as the required cost of equity, and g as the dividend growth rate, the present value formula for constant growth dividends is:

$$P_0 = \$21.40 = \frac{D_1}{r-g} = \frac{\$1.07}{0.12-g}$$

$$0.12-g = \frac{\$1.07}{\$21.40}$$

$$g = 0.12 - \frac{\$1.07}{\$21.40} = 0.07 = 7\%$$

For Further Reference:
Study Session 9, LOS 27.d
SchweserNotes: Book 3 p.2
CFA Program Curriculum: Vol.4 p.9

Study Session 10, LOS 30.d
SchweserNotes: Book 3 p.69
CFA Program Curriculum: Vol.4 p.217

Question #31 of 60

B) Determining free cash flow is easier than dividends.

Explanation

An analyst must review the cash flows from a company's operating, investing, and financing activities to generate a useful free cash flow, while dividends are simply set by the board of directors. Analysts use free cash flow whenever an investor takes a control perspective, such as in the event of an acquisition. The P/E model is considered weak because accounting issues can impact earnings. Companies that do not generate free cash flow in the long run are in financial trouble.

For Further Reference:
Study Session 11, LOS 31.a
SchweserNotes: Book 3 p.110
CFA Program Curriculum: Vol.4 p.269

Question #32 of 60

C) $477 million.

Explanation

Free cash flow to the firm (FCFF) can be calculated in many ways but in this question, you are given enough information to calculate the measure in the following way:

FCFF = net income + non-cash charges + interest (1 − t) − fixed capital investment − working capital investment

$FCFF_0$ = 20,000,000 + 1,250,000 + 0 − 8,450,000 − (9,985,000 − 7,460,000) = 10,275,000

The next step is to forecast the future FCFFs and the terminal value:

$FCFF_1$ = 10,275,000(1.25) = 12,843,750

$FCFF_2$ = 12,843,750(1.25) = 16,054,688

terminal value = 16,054,688(1.12) / (0.15 − 0.12) = 599,375,000

Next, calculate the present value of the FCFFs and the terminal value:

$$PV_{FCFs} = \frac{12,843,750}{1.15} + \frac{(16,054,688 + 599,375,000)}{(1.15)^2} = 476,521,739$$

If a firm has non-operating assets (e.g., land held for investment) on its balance sheet, the value of these assets must be added to the value of the operating assets (determined using the present value of the FCFFs and terminal value) to find the total firm value.

total firm value = value of operating assets + value of non-operating assets

total firm value = 476,521,739 + 875,000 = 477,396,739

For Further Reference:
Study Session 11, LOS 31.j
SchweserNotes: Book 3 p.127
CFA Program Curriculum: Vol.4 p.304

Question #33 of 60

A) no effect.

Explanation

If BioTLab established a dividend there would no impact on either FCFF or FCFE. Changing the company capital structure by increasing debt will not impact FCFF, although it will initially increase FCFE by the amount of debt issued and then reduce FCFE thereafter by the after-tax interest expense.

For Further Reference:
Study Session 11, LOS 31.g
SchweserNotes: Book 3 p.123
CFA Program Curriculum: Vol.4 p.299

Question #34 of 60

A) FCFF model.

Explanation

The FCFF model is better than the FCFE model in valuing debt laden, cyclical companies, and companies with a changing capital structure. Since Groh Group does not pay a dividend, the DDM model would be the least appropriate model to value the company.

For Further Reference:
Study Session 11, LOS 31.a, g
SchweserNotes: Book 3 p.110, 123
CFA Program Curriculum: Vol.4 p.269, 299

Question #35 of 60

A) 6%.

Explanation

WACC = (0.35 / 1.35)(0.06)(1 - 0.40) + (1 / 1.35)(0.13) = 10.56%

FCFF = FCFE + Int(1 – T) - net borrowing
= 20,000,000 + 4,000,000(1 - 0.40) - 1,600,00
= 20,800,000

$$\text{firm value} = \frac{FCFF_0(1+g)}{WACC - g}$$

$$483,508,770 = \frac{20,800,000(1+g)}{0.1056 - g}$$

g = 0.06

For Further Reference:
Study Session 11, LOS 31.j
SchweserNotes: Book 3 p.127
CFA Program Curriculum: Vol.4 p.304

Question #36 of 60

C) FCFF can be inflated by increasing capital expenditures relative to depreciation.

Explanation

FCFF can be inflated by decreasing capital expenditures relative to depreciation. All other statements are true.

For Further Reference:
Study Session 11, LOS 31.e, g
SchweserNotes: Book 3 p.122, 123
CFA Program Curriculum: Vol.4 p.293, 299

Question #37 of 60

C) 100.915.

Explanation

Interest rate tree: Discount maturity value back one year at different 1-year forward rates, then take the equally weighted average of those values discounted back to today at today's 1-year rate:

V = 0.5 × [(108 / 1.08530) + 8] / 1.0725 + 0.5 × [(108 / 1.06983) + 8] / 1.0725

V = 0.5 × (99.512 + 8) / 1.0725 + 0.5 × (100.951 + 8) / 1.0725

V = 50.122 + 50.793 = 100.915

Today	Year 1	Year 2
		108
	107.512	
100.915		108
	108.951	
		108

For Further Reference:
Study Session 12, LOS 36.d
SchweserNotes: Book 4 p.37
CFA Program Curriculum: Vol.5 p.81

Question #38 of 60

A) 100.472.

Explanation

Use the same method as in the previous problem, but remember that if the value at one node exceeds the call price, then the call price should be used for that node. In this case, the value at the lower node would be 108 / 1.06983 = 100.951. The assumption is that the bond would be called at the call price one year from now, or 100.

V = 0.5 × (99.512 + 8) / 1.0725 + 0.5 × (100 + 8) / 1.0725

V = 50.122 + 50.350 = 100.472

For Further Reference:
Study Session 13, LOS 37.f
SchweserNotes: Book 4 p.55
CFA Program Curriculum: Vol.5 p.125

Question #39 of 60

C) Both statements are correct.

Explanation
Statement 1 is correct. The value of the option would be the difference between the value calculated with no call feature (the Bratton bonds) and the value calculated assuming the bond is callable (the Hardin bonds). Recall that the vignette stated the Bratton and Hardin bonds were identical except for the call feature in the Hardin bonds. The option value would therefore be: 100.915 - 100.472 = 0.443. Statement 2 is also correct. Increased volatility would increase the value of the option, thus lowering the value of the callable bond.

For Further Reference:
Study Session 13, LOS 37.b, h
SchweserNotes: Book 4 p.55, 61
CFA Program Curriculum: Vol.5 p.115, 135

Question #40 of 60

A) correct that the OAS will provide insight into the liquidity risk of the Hardin bonds, and Diffle is correct that different volatility assumptions would change the OAS.

Explanation
The OAS accounts for compensation for credit and liquidity risk after the optionality has been removed (i.e., after cash flows have been adjusted). Since in this case the credit risk of the bonds is similar, the OAS could prove helpful in evaluating the relative liquidity risk. OAS will be affected by different assumptions regarding the volatility of interest rates.

For Further Reference:
Study Session 13, LOS 37.g
SchweserNotes: Book 4 p.59
CFA Program Curriculum: Vol.5 p.134

Question #41 of 60

C) higher than the duration of Hardin bonds under a declining interest rate scenario.

Explanation
Option-free Bratton bonds will have higher one-sided down duration compared to the callable Hardin bonds when the underlying option is at- or near-the-money. Due to the underlying call option, the appreciation of Hardin bonds in a declining interest rate scenario will be limited.

For Further Reference:
Study Session 13, LOS 37.k
SchweserNotes: Book 4 p.64
CFA Program Curriculum: Vol.5 p.144

Question #42 of 60

B) The duration estimate for the Bratton bonds will reflect the projected percentage change in price for a 100-basis-point change in interest rates.

Explanation

The duration formula given will calculate the percentage change in price for a 100 basis point change in yield, regardless of the actual change in rates used to derive BV_- and BV_+. The standard backward induction process would ensure that the derived values of BV_- and BV_+ reflect any potential change in cash flows due to embedded options.

For Further Reference:
Study Session 13, LOS 37.i
SchweserNotes: Book 4 p.62
CFA Program Curriculum: Vol.5 p.139

Question #43 of 60

C) Put F has the largest delta of all the BIC options.

Explanation

An option that is deep in-the-money will have the largest delta. Call options that are deep in-the-money will have a delta close to one, while put options that are deep in-the-money will have a delta close to -1. Options that are out-of-the-money will have deltas close to zero. Put F is the option that is deepest in-the-money, and therefore has the largest delta (even though it is negative, the change in the price of Put F given a change in the price of BIC stock will be larger than any of the other options). Call C is the deepest out-of-the-money option, and thus has the smallest delta.

For Further Reference:
Study Session 14, LOS 41.l
SchweserNotes: Book 4 p.181
CFA Program Curriculum: Vol.5 p.370

Question #44 of 60

A) The sensitivity of Put E's price to changes in BIC's stock price is very likely to change.

Explanation

An option's gamma measures the change in the delta for a change in the price of the underlying asset. The gamma of an option is highest when an option is at-the-money since the probability of moving in or out of the money is high. Put E is close to being at-the-money and because it has a gamma of greater than zero, the sensitivity of Put E's price to changes in BIC's stock price (i.e., the delta) is likely to change. The higher the gamma, the greater the change in delta given a change in stock price.

For Further Reference:
Study Session 14, LOS 41.m
SchweserNotes: Book 4 p.186
CFA Program Curriculum: Vol.5 p.370

Question #45 of 60

A) The delta on Put F will move closer to -1.

Explanation

As the option moves further into the money and as the expiration date approaches, the delta of a put option moves closer to -1.

For Further Reference:
Study Session 14, LOS 41.l
SchweserNotes: Book 4 p.181
CFA Program Curriculum: Vol.5 p.370

Question #46 of 60

B) BIC had a negative earnings surprise.

Explanation

The premium on Put D has risen from $2.31 to $3.18 and there is still time left until expiration. Therefore, the increase in value must have come from either a decrease in stock price, an increase in volatility, or both of these events. Choice A would be correct if the option was at expiration and the $3.18 represented only intrinsic value. Since we are not yet at the expiration date, the stock price must be above $26.82. A negative earnings surprise would most likely cause a drop in the market price of the stock. Since there is no indication of the exact amount of the drop in price, the premium observed is a possibility. A decrease in BIC volatility would reduce the put premium, not increase it.

For Further Reference:
Study Session 14, LOS 41.l
SchweserNotes: Book 4 p.181
CFA Program Curriculum: Vol.5 p.370

Question #47 of 60

A) Add put options to the portfolio as the put option delta moves closer to zero.

Explanation

To protect a portfolio against an expected decrease in the value of a long equity position, put options can be purchased (i.e., a protective put strategy). The number of puts to purchase depends on the hedge ratio, which depends on the option's delta. Because the delta of the put options is negative, as the option delta moves closer to -1, the number of options necessary to maintain the hedge falls.

For Further Reference:
Study Session 14, LOS 41.m
SchweserNotes: Book 4 p.186
CFA Program Curriculum: Vol.5 p.370

Question #48 of 60

C) Neither of Grimell's statements is correct.

Explanation

Grimell is incorrect in both of his statements. Using put-call parity, Mabry could create a position in which he would earn the risk-free rate of return but he would need to sell calls and buy puts with the same strike price, not the same premium. As the vega (volatility relative to price) of an option increases, it would become more sensitive to changes in the volatility of the underlying asset. Therefore, the price would likely rise, not fall.

For Further Reference:
Study Session 14, LOS 41.l
SchweserNotes: Book 4 p.181
CFA Program Curriculum: Vol.5 p.370

Study Session 14, LOS 42.b
SchweserNotes: Book 4 p.202
CFA Program Curriculum: Vol.5 p.394

Question #49 of 60

A) The monthly VaR of $225,000 indicates an annual VaR of $2.7 million.

Explanation
A monthly VaR cannot be annualized by simply multiplying by 12. The monthly return and standard deviation would need to be annualized and VaR recalculated. An assumption of a normal distribution is invalid if options were in the portfolio.

For Further Reference:
Study Session 16, LOS 49.b
SchweserNotes: Book 5 p.165
CFA Program Curriculum: Vol.6 p.308

Question #50 of 60

B) conditional VaR.

Explanation
The estimated loss under the condition that VaR has been exceeded is known as conditional VaR.

For Further Reference:
Study Session 16, LOS 49.e
SchweserNotes: Book 5 p.169
CFA Program Curriculum: Vol.6 p.320

Question #51 of 60

C) incorrect regarding the $225,000 and the maximum loss.

Explanation
The $225,000 is a minimum loss that will be exceeded 5% of the time. The maximum possible loss is the value of the portfolio.

For Further Reference:
Study Session 16, LOS 49.a
SchweserNotes: Book 5 p.164
CFA Program Curriculum: Vol.6 p.303

Question #52 of 60

B) reverse stress testing.

Explanation

The description is of reverse stress testing, which is a form of scenario analysis, not sensitivity analysis. A Monte Carlo simulation would run many repeated scenarios.

For Further Reference:
Study Session 16, LOS 49.h
SchweserNotes: Book 5 p.171
CFA Program Curriculum: Vol.6 p.323

Question #53 of 60

C) Execution algorithms are not used to profit from arbitrage opportunities.

Explanation
Execution algorithms are not designed to profit from arbitrage opportunities, rather they are used to minimize the impact of large trades by slicing them up into smaller trades and releasing to the market in stages.

For Further Reference:
Study Session 17, LOS 52.c
SchweserNotes: Book 5 p.214
CFA Program Curriculum: Vol.6 p.506

Question #54 of 60

C) smart order routing was developed as a response to market fragmentation.

Explanation
Market fragmentation occurs when the number of venues trading the same instrument increases. As a response, algorithms are used to aggregate liquidity and route orders to the venues that have the best price and market depth.

For Further Reference:
Study Session 17, LOS 52.d
SchweserNotes: Book 5 p.216
CFA Program Curriculum: Vol.6 p.509

Question #55 of 60

A) macroeconomic factor models.

Explanation
The models in equations 1 through 4 employ factors derived from macroeconomic variables.

For Further Reference:
Study Session 16, LOS 48.d
SchweserNotes: Book 5 p.146
CFA Program Curriculum: Vol.6 p.275

Question #56 of 60

A) the expected return for Portfolio A, assuming no surprises in the macroeconomic variables.

Explanation
The intercept in a macroeconomic factor model equals the expected return for the portfolio examined in the model (assuming no surprises in the macroeconomic variables). The factors in

the multifactor equations, F_{IS} and F_{BC}, are factor "surprises," which by definition are expected to equal zero (i.e., by definition, zero "surprise" is "expected"). So, by assumption, F_{IS} and F_{BC} are expected to equal zero. Therefore, the expected return for Portfolio A equals its intercept (17.5%).

For Further Reference:
Study Session 16, LOS 48.d
SchweserNotes: Book 5 p.146
CFA Program Curriculum: Vol.6 p.275

Question #57 of 60

C) 15.2%.

Explanation
The multifactor equation for Portfolio A is used to answer this question. Simply insert the factor surprises for F_{IS} and F_{BC}. From Exhibit 1, F_{IS} = 0.01 - 0.02 = -0.01 and F_{BC} = 0.02 - 0.03 = -0.01. Therefore, both factor surprises equal -1%. Substituting into the multifactor equation for Portfolio A and including the firm-specific surprise return: 0.1750 + 2(-0.01) + 1.5(-0.01) + 0.012 = 15.2%.

For Further Reference:
Study Session 16, LOS 48.d
SchweserNotes: Book 5 p.146
CFA Program Curriculum: Vol.6 p.275

Question #58 of 60

A) Portfolios D and E.

Explanation
A portfolio that has a sensitivity of 1.0 to one of the macroeconomic factors, and zero sensitivity to the remaining macroeconomic factors is called a factor portfolio. Portfolios D and E are factor portfolios. A portfolio that has factor sensitivities that equal the sensitivities of the benchmark is called a tracking portfolio. Portfolio Z has factor sensitivities that exactly match those of the S&P 500.

For Further Reference:
Study Session 16, LOS 48.f
SchweserNotes: Book 5 p.153
CFA Program Curriculum: Vol.6 p.283

Question #59 of 60

C) 13.3%.

Explanation
According to the Arbitrage Pricing Model, the expected return equals risk-free rate + b_1RP_1 + b_2RP_2, where RP_i is the risk premium for factor *i*. Portfolio D is designed to have sensitivity equal to one to the investor sentiment risk factor and sensitivity equal to zero to the business cycle risk factor. Similarly, Portfolio E is a portfolio designed to have sensitivity equal to zero to the investor sentiment risk factor and sensitivity equal to one to the business cycle risk factor. Portfolios that have a sensitivity equal to 1.0 to one factor and zero sensitivity to the remaining factors are called *factor portfolios*. Therefore, Portfolio D is the investor sentiment factor portfolio, and Portfolio E is the business cycle factor portfolio. According to the multifactor equations, the expected return for the investor sentiment factor portfolio (D) equals 9% and for the business cycle factor portfolio (E) equals 8%. Risk premiums are defined as the difference between the

expected return on the appropriate factor portfolio and the risk-free rate. The risk-free rate is 5% (the long-term government bond yield). Therefore, the investor sentiment risk premium equals 0.09 - 0.05 = 0.04. Similarly, the business cycle risk premium equals 0.08 - 0.05 = 0.03. Therefore, the expected return for Portfolio P equals 0.05 + 1.25(0.04) + 1.1(0.03) = 13.3%.

For Further Reference:
Study Session 16, LOS 48.d
SchweserNotes: Book 5 p.146
CFA Program Curriculum: Vol.6 p.275

Question #60 of 60

C) Portfolio Z.

Explanation

Active factor risk is caused by deviations of a portfolio's factor sensitivities from the benchmark factor sensitivities. Deviations are quite large for both Portfolios D and E, but Portfolio Z's factor sensitivities match those of the S&P 500 benchmark (1.5 and 1.25).

For Further Reference:
Study Session 16, LOS 48.f
SchweserNotes: Book 5 p.153
CFA Program Curriculum: Vol.6 p.283